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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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097435,613 11708/99 ISHIHARA

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HM12/0208

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EXAMINER

PRATS, F

ART UNIT

PAPER NUMBER

1651

DATE MAILED:

02/08/01

RD 58-01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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FEB 09 2001

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

**Office Action Summary**

Application No.

09/435,613

Applicant(s)

ISHIHARA ET AL

Examiner

Francisco C Prats

Art Unit

1651

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

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**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some \* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 08/900,124
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_

- 18) ☐ Interview Summary (PTO-413) Paper No( ) \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

**DETAILED ACTION**

1. The preliminary amendment filed November 8, 1999, has been received and entered.
2. Claims 9-19 are pending and are examined on the merits.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 9, 15 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Townsley (U.S. Pat. 4,745,058).

Townsley discloses the preparation and recovery of bacterial cellulose by culturing a cellulose-producing microorganism which may be *Acetobacter* in the presence of an antibiotic, which may be sorbic acid. See, e.g., col. 2, lines 4 and 5. To the extent that an antibiotic stops growth of a microorganism, the antibiotic of Townsley is clearly encompassed by the claimed recitation "cell division inhibitor."

A holding of anticipation is clearly required.

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**Claim Rejections - 35 USC § 103**

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 9-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iguchi et al (U.S. Pat. 4,742,164) and Johnson et al (U.S. Pat 4,863,565) in view of Hestrin et al (Nature 159:64-65 (1947)) and Townsley (U.S. Pat. 4,745,058).

Both Iguchi and Johnson clearly disclose the production of bacterial cellulose from a number of microorganisms, including *Acetobacter pasteurianus*, thereby suggesting the use of any strain of that species in such a process, including the claimed

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FERM BP-4176. Neither Iguchi nor Johnson explicitly discloses the inclusion of a cell division inhibitor in the culture.

However, both Hestrin and Johnson disclose that non-proliferating cells of the claim-designated microorganism produce cellulose. Thus, the artisan of ordinary skill at the time of applicant's invention would have been motivated to have included a cell division inhibitor in the culture medium when culturing the microorganism to ensure cellulose production. Thus, the artisan of ordinary skill clearly would have been motivated to have included a cell division inhibitor in the culturing processes disclosed in Iguchi and Johnson.

It is noted that neither Hestrin nor Johnson discloses including in the culture medium the specific compounds recited in claims 10-13 and 18. However, as discussed above, Townsley discloses and claims the use of an antibiotic in the production of bacterial cellulose. See Townsley at claim 8, also col. 2, lines 4 and 5. Thus, in view of Townsley's disclosure of the desirability of including antibiotics in a culture medium used to produce bacterial cellulose, the inclusion of known antibiotics, recited in claim 10-13 and 18, would have been further obvious at the time of applicant's invention.

*Claim Rejections - 35 USC 102/103*

8. Claim 19 is rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Iguchi et al (U.S. Pat. 4,742,164) or Johnson et al (U.S. Pat 4,863,565) or Hestrin et al (Nature 159:64-65 (1947)) or Townsley (U.S. Pat. 4,745,058).

Each of the references discloses a bacterial cellulose product which appears to be identical to the presently claimed product, based on the fact that the prior art product has a chemical structure identical to the claimed product. Moreover, the product produced in the Townsley patent is prepared by a process which uses an antibiotic in the culturing step, exactly as recited in the claims. Consequently, the claimed product appears to be anticipated by the reference.

However, even if the reference product and the claimed product are not one and the same and there is, in fact, no anticipation, the reference product would, nevertheless, have rendered the claimed product obvious to one of ordinary skill in the art at the time the claimed invention was made in view of the fact that the claimed product is prepared by culturing a microorganism identical to that disclosed in the prior art references, any difference between the products made by these apparently identical organisms being an expected nominal

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difference between individual members of the same species or strain. Thus the claimed invention as a whole was clearly *prima facie* obvious especially in the absence of sufficient, clear, and convincing evidence to the contrary.

Regarding the propriety of this type of alternative rejection, note that MPEP § 2113 states that:

. . . [w]hen the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or section 103 of the statute is eminently fair and acceptable. As a practical matter, the Patent and Trademark Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith. *In re Brown*, 59 CCPA 1063, 173 USPQ 685 (1972).

MPEP § 2113 also clearly states that

'The Patent Office bears a lesser burden of proof in making out a case of *prima facie* obviousness for product-by-process claims because of their peculiar nature' than when a product is claimed in the conventional fashion. *In re Fessmann*, 180 USPQ 324 (CCPA1974)."

Rejection is therefore clearly required.

#### ***Double Patenting***

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground

provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 9-19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of U.S. Patent No. 6,060,289.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims recite all of the process steps recited in the patented claims. The patented claims entirely encompass all of the claims under examination. In this regard note further that certain embodiments in product-by-process claim 19 are clearly encompassed by the patented claims, particularly in view of the fact that the patented product can be made by the process steps recited in product-by-process claim 19. Rejection is therefore required.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francisco C Prats whose telephone number is 703-308-3665. The examiner can normally be reached on Monday through Friday, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 703-308-4743. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 for regular communications and 703-305-3014 for After Final communications.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

A handwritten signature in black ink, appearing to read 'F. Prats', with a stylized, cursive script.

Francisco C Prats  
Primary Examiner  
Art Unit 1651

FCP

February 7, 2001